

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT 05 JUL 2005

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing

(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/GB2004/000004

International filing date (day/month/year)
05.01.2004

Priority date (day/month/year)
03.01.2003

International Patent Classification (IPC) or both national classification and IPC
G08B29/18, G08B29/14

Applicant

APOLLO FIRE DETECTORS LIMITED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**International application No.
PCT/GB2004/000004**Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**International application No.
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Box No. II Priority

1. ☒ The following document has not been furnished:☒ copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

Box No. IV Lack of unity of invention

1. ☐ In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has:☐ paid additional fees.☐ paid additional fees under protest.☐ not paid additional fees.2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

☐ complied with☒ not complied with for the following reasons:**see separate sheet**

4. Consequently, this report has been established in respect of the following parts of the international application:

☒ all parts.☐ the parts relating to claims Nos.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**International application No.
PCT/GB2004/000004**Box No. V Reasoned statement under Rule 43b/s.1(a)(i) with regard to novelty, inventive step or
Industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Yes: Claims	2-14
	No: Claims	1
Inventive step (IS)	Yes: Claims	5 6
	No: Claims	1-4 7-14
Industrial applicability (IA)	Yes: Claims	1-14
	No: Claims	

2. Citations and explanations**see separate sheet**

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/GB2004/000004

The following documents are referred to in this communication:

D1 : US 5 716 725 A (RIVERON MARIO A ET AL) 10 February 1998 (1998-02-10)

D2 : US 5 966 079 A (TANGUAY WILLIAM P) 12 October 1999 (1999-10-12)

To Item IV.

The separate inventions are:

Claims 1-6: A hazard detector comprising (...) means for modifying the behaviour of the detector during start-up or test mode to facilitate commissioning or testing of the detector.

Claims 7-14: A hazard detector being adapted to, upon application of power, to emit a local indicator signal if the positive and negative terminals of the detector have a correct polarity orientation.

They are not so linked as to form a single general inventive concept (Rule 13.1 PCT) for the following reasons:

The technical features present in the claims, that is means for modifying temporarily the behaviour -during either start up or during a test mode- of a detector on the one hand, and a local indicator of a correct polarity are neither the same nor corresponding. The problems that might be solved be either of them (notwithstanding the analysis below under V) being unlinked.

To Item V.

1 INDEPENDENT CLAIM 1

1.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D2 discloses (the references in parenthesis applying to this document): a hazard detector comprising means for detecting a hazardous condition and for indicating an alarm upon such detection, and means for modifying the behaviour of the detector during a start-up (See, for instance, Fig. 24, power up and

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initialisation routine, along with its description, Cols 19 and 20) or test mode (see step 2420, Fig. 24) to facilitate commissioning or testing of the detector.

The examiner would like to point out that the claim is laid out in too general terms, which do not incorporate the essential features of the invention as disclosed in the embodiment of the description (see PCT preliminary examination guidelines, C III, 4.4). Therefore the claim lacks clarity. This lack of clarity directly influences the above mentioned lack of unity between the independent claims.

2 INDEPENDENT CLAIM 7

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 7 does not involve an inventive step in the sense of Article 33(3) PCT.

Document D1 discloses (the references in parenthesis applying to this document): an electronic device for connection between positive and negative power lines, the detector having a positive and a negative terminal and being adapted, upon application of power to the power lines, to emit a local indicator if the positive and negative terminals of the detector have an incorrect polarity orientation to the positive and negative lines (see abstract).

The subject-matter of claim 1 therefore differs from this known prior art in that the local indication is emitted upon CORRECT polarity orientation to the lines.

This difference constituting a slight operational change in the logic employed by claim 7, which comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved (a confirmation of the right insertion) can readily be foreseen. Consequently, the subject-matter of claim 7 also lacks an inventive step.

As to the designation of the claim (an electronic device in the prior art versus a hazard detector), it is clear that the person skilled in the art would look, confronted to the problem of connecting a hazard detector to a power line, in the general field of polarity check confirmation in electronic apparatus, and would apply the teachings derived from the knowledge present in such field.

3 DEPENDENT CLAIMS 8-14

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Dependent claims 8 to 14 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step (Article 33(2) and (3) PCT). They merely disclose commonplace options in a system indicating the polarity orientation of the connection of a hazard detector that would be incorporated in such a detector by the person skilled in the art in order to obtain their respective expected effects.

4 DEPENDENT CLAIMS 5 AND 6

The combination of the features of dependent claims 5 or 6 is neither known from, nor rendered obvious by, the available prior art.